

Application No. 10/735996 (Docket: CNTR.2152)
37 CFR 1.111 Amendment dated 07/06/2006
Reply to Office Action of 04/06/2006

REMARKS/ARGUMENTS

In the Office Action, the Examiner noted that claims 1-29 are pending in the application. The Examiner additionally stated that claims 1-29 are rejected. By this amendment, claim 7 is cancelled and claims 1, 6, 8-9, 11, 16-18, 21, and 26-27 are amended. Hence, claims 1-6 and 8-29 are pending in the application.

Applicant hereby requests further examination and reconsideration of the application, in view of the foregoing amendments.

In the Claims

Claim Objections

The Examiner objected to claims 1-29 because of the use of "micro instruction," indicating that the common use is "microinstruction." Correction was not required. In response, Applicant requests that the objections to claims 1-29 be held in abeyance until such time as allowable subject matter is identified.

Rejections Under 35 U.S.C. §112

The Examiner rejected claims 6-9 and 16-19 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner noted that the claims recite "each. . . " but don't say each what

By this communication, claims 6, 8, and 16-18 are amended to recited each "of said plurality of micro instruction queue entries," thereby rendering the claims such that they particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 7 is cancelled. And claims 9 and 19 do not recite an "each." Accordingly, it is requested that the rejections of claims 6-9 and 16-19 be withdrawn.

Rejections Under 35 U.S.C. §102(b)

The Examiner rejected claims 1, 2, 4-6, 11, 12, 14-16, 21, 22, and 24-26 under 35 U.S.C. 102(b) as being anticipated by Carbine et al., U.S. Patent No. 5,222,244 (hereinafter, Carbine). Applicant respectfully traverses the Examiner's rejections.

Application No. 10/735996 (Docket: CNTR.2152)
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Regarding claim 1, the Examiner noted:

A microprocessor apparatus, for precluding a pipeline stall due to microcode ROM access delay, the microprocessor apparatus comprising:

a plurality of micro instruction queue entries, each corresponding to an instruction, and said each comprising a plurality of micro instructions and a microcode entry point (col. 6, lines 58-68; col. 7, lines 1-19); and

early access logic, coupled to said micro instruction queue, configured to employ said microcode entry point to access a microcode ROM prior to when said microcode entry point is provided to register logic, whereby said microcode ROM provides a first micro instruction to said register logic when said first micro instruction is required by said register logic (col. 8, lines 39-43).

Applicant respectfully disagrees with the Examiner's rejection of claim 1 for the following reasons. First, the invention of Carbine does not teach a micro instruction queue, for receiving a plurality of queue entries from a translator, and for providing said plurality of queue entries to register logic. Carbine does not teach such a queue. Rather, Carbine teaches a translation ROM (122) which is a large PLA which contains micro instructions. The microinstructions are the first two, or sometimes three microinstructions that are part of a microcode flow that implements a particular complex instruction. (col. 6, lines 58-63) This is substantially equivalent to Applicant's translator, but is in no way a queue of translated micro instructions, as is recited in claim 1. Secondly, since Carbine does not teach a micro instruction queue, which provides queue entries including microcode entry point to access a microcode ROM to register logic, it does not follow that Carbine teaches early access logic that enables the microcode ROM to provide a first micro instruction to the register logic when the first micro instruction is required. The translation ROM 122 which the Examiner points out in col. 8, lines 39-43, provides the first part of a micro instruction flow. Applicant's early access logic, in contrast, provides the second part of the micro instruction flow (from the microcode ROM) that corresponds to a complex instruction.

Application No. 10/735996 (Docket: CNTR.2152)
37 CFR 1.111 Amendment dated 07/06/2006
Reply to Office Action of 04/06/2006

With respect to claims 2 and 4-6, these claims depend from claim 1 and add further limitations that are neither anticipated nor made obvious by Carbine. Accordingly, Applicant respectfully requests that the Examiner withdraw his rejections to claims 2 and 4-6.

Claims 11 and 21 recite substantially the same elements and limitations which are argued above in traversal of the rejection of claim 1. Consequently, it is requested that the rejections of claims 11 and 21 be withdrawn as well.

With respect to claims 12 and 14-16, these claims depend from claim 11 and add further limitations that are neither anticipated nor made obvious by Carbine. Accordingly, Applicant respectfully requests that the Examiner withdraw his rejections to claims 12 and 14-16.

With respect to claims 22 and 24-26, these claims depend from claim 21 and add further limitations that are neither anticipated nor made obvious by Carbine. Accordingly, Applicant respectfully requests that the Examiner withdraw his rejections to claims 22 and 24-26.

Rejections Under 35 U.S.C. §103(a)

The Examiner rejected claims 3, 7-10, 13, 17-20, and 27-29 under 35 U.S.C. 103(a) as being unpatentable over Carbine in view of the background of the application. Applicant respectfully traverses the Examiner's rejections and notes that since allowable subject matter has been argued over Carbine with reference to the traversals of the rejections of claims 1, 11, and 21, and since these claims depend (as applicable) from claims 1, 11, and 21, and add limitations over that which has been argued as being allowable, it is requested that the rejections of claims 3, 8-10, 13, 17-20, and 27-29 be withdrawn.

By this amendment, claim 7 is cancelled, thereby rendering the Examiner's rejection moot.

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CONCLUSIONS

In view of the arguments advance above, Applicant respectfully submits that claims 1-6 and 8-29 are in condition for allowance. Reconsideration of the rejections is requested, and allowance of the claims is solicited.

Applicant earnestly requests that the Examiner contact the undersigned practitioner by telephone if the Examiner has any questions or suggestions concerning this amendment, the application, or allowance of any claims thereof.

I hereby certify under 37 CFR 1.8 that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on the date of signature shown below.

Respectfully submitted,
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07/06/2006

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